

Oct. 27, 1936.

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2,058,602

COIN GAUGING APPARATUS

Filed July 11, 1935

2 Sheets-Sheet 1

FIG. 1

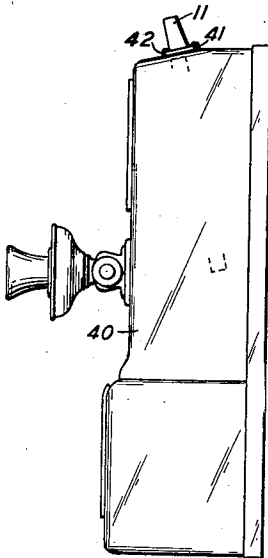


FIG. 2

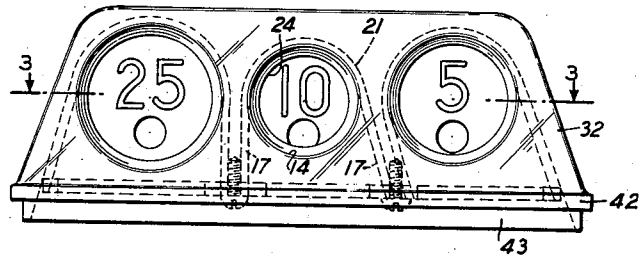


FIG. 3

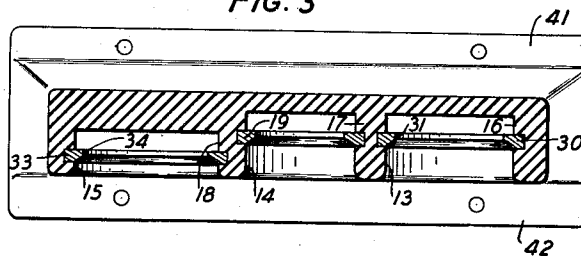
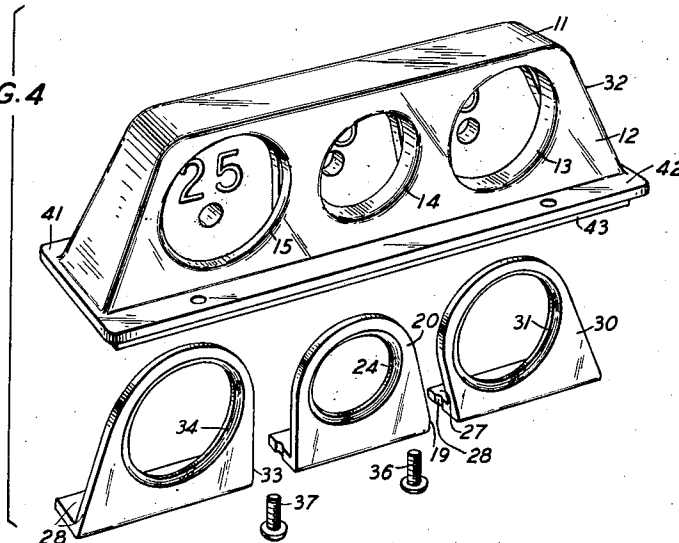


FIG. 4



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FIG. 5

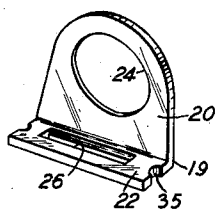


FIG. 6

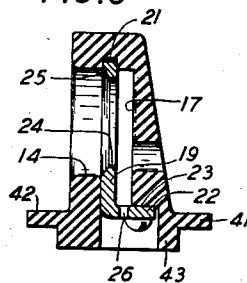


FIG. 7

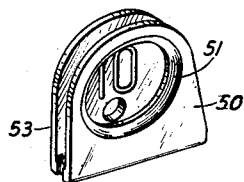


FIG. 8

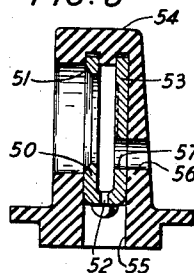


FIG. 9

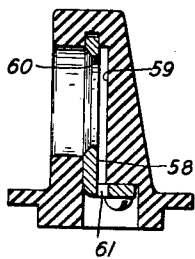
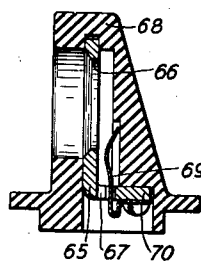


FIG. 10



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2,058,602

COIN GAUGING APPARATUS

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Application July 11, 1935, Serial No. 30,781

4 Claims. (Cl. 194—102)

This invention relates to a coin gauge for coin collecting apparatus such as that employed at a telephone pay station.

The usual type of telephone coin collector such as that disclosed in the O. F. Forsberg U. S. Patent 1,043,219, issued November 5, 1912, comprises a housing upon which is mounted what is commonly called a coin gauge comprising a metallic block with a plurality of openings for receiving coins of different denominations. Associated with each of these openings is a slot for guiding the deposited coin into the housing for subsequent collection or refund depending upon whether the desired services are secured.

Such a coin gauge has heretofore been usually die cast and has been a relatively expensive article to produce, requiring many and widely different operations in its production. The size of each opening into which the coins are placed must be held to fairly close limits in order to gauge properly each coin for maximum diameter, and when the gauge is electroplated with a metal such as chromium very careful control of the plating process is required to insure that the thickness of the plating is such as to meet manufacturing limits upon the size of the finished opening. Another factor involved in the manufacture of such gauges is that the openings must be varied to take coins of different denominations or of different countries.

An object of this invention is to simplify the construction of such coin gauges to obtain an economical assembly and to permit changing the gauge to accommodate different size coins without undue additional expense.

In accordance with the preferred form of this invention there is provided a universal gauge block slotted to have assembled therewith one or a plurality of gauging inserts suitably formed of hard metal such as stainless steel. The inserts are preferably arranged to be readily removable from the mounting block so that insert gauges having different size openings for coins of various denominations or coinage may be incorporated in the same type of block to meet specific requirements for various coin operated devices.

Thus, the gauge mounting block may be die cast or made of material such as phenol plastic with a plurality of spaced openings in its front face and having a slot extending upwardly from its base to the region behind each opening. Each insert may comprise a strip of metal bent to provide a plurality of angularly disposed portions with a coin diameter gauging aperture in one portion and a coin thickness gauging slot in another

portion. The dimensions of each insert are such as to permit it to be forced up by one of the slots in the mounting block until the coin diameter gauge aperture registers with one of the openings in the front face of the mounting block where the insert may be suitably held in place by screws, for example. The gauging of deposited coins is, therefore, accomplished by openings in the removable insert and not by openings in the mounting block itself.

Referring to the drawings

Fig. 1 is a side view of a telephone coin collector of a type capable of employing a coin gauge of this invention;

Fig. 2 is a front view of one form the coin gauge housing of this invention may possess;

Fig. 3 is a sectional view of Fig. 2 taken along the line 3—3;

Fig. 4 is an exploded view in perspective of the coin gauge housing of Fig. 2 with the coin gauging inserts removed from the housing;

Fig. 5 is another view of one of the coin gauging inserts of Fig. 4;

Fig. 6 is a sectional view of the coin gauging insert of Fig. 5 located within the housing of Fig. 2;

Fig. 7 is an alternative type of coin gauging insert;

Fig. 8 is a sectional view of the coin gauging insert of Fig. 7 located in a housing substantially of the same type as that disclosed in Fig. 2; and

Figs. 9 and 10 represent sectional views of other types of coin gauge inserts.

One form of the coin gauge of this invention is shown in Figs. 2 to 6 inclusive, and comprises a unitary housing or mounting block 11 in the front wall 12 of which are provided three circular openings 13, 14, and 15 for receiving coins of different denominations such as five, ten and twenty-five cent pieces. From these openings 13, 14, and 15 slots or coin runways 16, 17, and 18 extend downwardly through the bottom of housing 11 to permit the discharge of the proper coin inserted in each opening in the front wall of the housing. Each circular opening 13, 14, and 15 has a diameter somewhat greater than the diameter of the coin which each opening is designed to receive.

Mounted within each of the coin runways 16, 17, and 18 is a gauging insert of similar design except as explained hereinafter. The insert 19 for runway 17 is typical and is shown in different views in Figs. 4, 5, and 6. Insert 19 has an apertured vertical portion 20 which is adapted to fit snugly around the inside face of opening 14 of the housing, the top and side edges of portion 20 fitting snugly in a groove 21 formed in 55

the top and upper sides of runway 17. Insert 19 also has an angular portion 22 which may be suitably attached by screws, for example, to projection 23 of the housing in the lower part of runway 17.

The circular opening 24 in portion 20 of insert 19 is of the proper diameter to gauge coins for maximum diameter and for the specific example shown should be only slightly greater in diameter than a standard ten-cent piece. Since opening 14 in the housing is substantially larger than opening 24 in the insert the front face of the insert around the opening 24 may be beveled as shown at the point 25 of Fig. 6 to facilitate the entrance of coins through opening 24. The foot 22 of the insert 19 has an elongated slot 26 to enable a coin inserted through opening 24 to be discharged from the housing. Slot 26 preferably should have a width only slightly greater than the thickness of the standard coin intended to be gauged by insert 19 so that opening 24 will reject coins or slugs having a diameter greater than the standard coin while slot 26 will reject coins or slugs of a thickness greater than standard even though of standard diameter.

Insert 30 for opening 13 is similar to insert 19 except that its aperture 31 and the slot in its base 27 are designed to accept five-cent pieces and the insert is of slightly different configuration due to the sloping end wall 32 of the housing. Insert 33 for opening 15 is similar to insert 30 except that its aperture 34 and the slot in its base 28 are designed to accept twenty-five cent pieces.

If desired, adjacent edges of the horizontal portions of inserts 19 and 30 may be formed as at the points 35, 38, Figs. 4 and 5, to receive a common fastening screw 36 and a similar screw 37 may be used for fastening the opposite edge of insert 19 and the adjacent edge of insert 33. If desired, the outer ends of the bases of inserts 30 and 33 may also be fastened to the housing in any suitable manner.

As previously stated, Fig. 2 shows the completed coin gauge with the three gauging inserts 19, 30, and 33 in place in the housing 11. Referring particularly to the ten cent gauging portion of the assembly the full line 14 represents the opening in the housing, full line 24 represents the opening in insert 19, dotted line 17 represents the sides of the coin runway leading down through the bottom of the housing, and dotted line 21 represents the bottom of the groove into which the edges of insert 19 fit as shown in Fig. 6.

In order to facilitate mounting such a coin gauge over an opening in the top of a coin collector 40 as shown in Fig. 1 the front and rear walls of the housing 11 may have horizontal extensions 41 and 42 which may be fastened by rivets, bolts or other means to the main body of the collector. It may also be desirable to have on the coin gauge a downwardly projecting rim 43 which fits into the opening in the coin collector box and prevents strips of paper or other material from being inserted under the gauge to block the coin runways. As shown in Fig. 3 the twenty-five cent gauging insert 33 is placed forwardly of the ten cent and five cent gauging inserts in order that the completed coin gauge may be employed in conjunction with the type of telephone coin collector disclosed, for example, in the O. F. Forsberg U. S. Patent 1,943,219, issued November 5, 1912.

The one piece gauge block 11 may be of die

cast metal or may be made of any suitable phenol plastic. The inserts 19, 30 and 33 may be made of a hard metal such as stainless steel.

In Figs. 2 to 6 each insert comprises an L-shaped strip of metal. Figs. 7 and 8 show an alternative type of gauging insert in the form of a U-shaped strip of metal. Referring to these last-mentioned figures the front vertical portion 50 contains the gauging opening 51 for gauging the coin diameter while the bottom member contains a slot 52 for gauging the thickness of a deposited coin. The top and side edges of front wall 50 and rear wall 53 fit snugly into spaced grooves in the mounting block 54 as shown in Fig. 8 while the distance between the outer faces of walls 50, 53 is such that the insert fits snugly within the slot 55 of the mounting block, this insert being held in place by screws, for example, as in the previous figures. As it is customary to provide a small hole 56 in the rear wall of a coin gauge opposite each coin opening in order to facilitate the removal of any slug or coin which has become wedged in the gauge it is obvious that with the form of insert shown in Figs. 7 and 8 it will be necessary to provide a small hole 57 in the back plate 53 in alignment with hole 56.

In Figs. 2 to 8 inclusive, the gauging inserts have gauged the coin for maximum thickness by a slot in the base of the insert such as slot 26 of Fig. 5 or slot 52 of Fig. 8 through which a coin must pass before entering the coin collector. This thickness gauging, however, may be accomplished in other ways as shown, for example, in Fig. 9. In this figure the rear face 58 of the insert is spaced away from the opposing wall 59 of the mounting block a distance only slightly greater than the thickness of the standard coin for the insert so that in Fig. 9 a coin of standard diameter but of greater than standard thickness will enter circular opening 60 but will be unable to pass between walls 58 and 59 to reach slot 61 and the collector which may be located beneath. It will be noted that the distance between walls 58 and 59 is much less than the distance between the corresponding walls in Fig. 6, for example.

Fig. 10 shows an additional modification that may be made in the gauging insert of Fig. 6 to prevent the possibility that a standard coin may be temporarily held in any manner by failure to fall freely through the thickness gauging slot. In Fig. 10 the gauging insert 65 as in Fig. 6 has a side wall circular opening 66, the slot 67 in the foot thereof having a width only slightly greater than the thickness of a standard coin. The forward edge of slot 67 is substantially in alignment with the rear face of insert 65 so that there is no obstructing ledge between slot 67 and the rear face of the insert on which a deposited coin might be temporarily held. The screw which holds this insert in the mounting block 68 also supports a broad leaf spring 69 which extends upwardly through a slot in the base 70 of the insert and this spring after bowing out in the path of coin travel has its upper end in a groove in the mounting block removed from the path of coin travel. The distance between spring 69 and the rear face of insert 65 should be substantially equal to the standard coin thickness so that a standard coin after insertion through opening 66 will be maintained in substantial alignment with slot 67.

It will be apparent that the gauging inserts 19, 30, and 33 in mounting block 11 may be readily removed when desired and inserts for gauging other types of coins may be substituted as long as each opening in the front wall in the mounting

block is larger than the diameter of the coin to be gauged by the insert associated therewith. It also will be apparent that if desired two or more of the gauging inserts 19, 30, 33 may have a unitary construction.

It also is to be understood that other embodiments of this invention are contemplated commensurate in scope with the appended claims.

What is claimed is:

1. A coin gauge comprising a unitary mounting block having a coin receiving hole in the front face thereof, a coin passage extending downwardly from the rear of said hole through the base of said block, a gauging member for insertion into said passage behind said hole, said member having one arm with a coin diameter gauging aperture therein and a second arm angularly disposed to said first arm, said second arm having a coin thickness gauging slot therein, and means for removably fastening said member with said aperture substantially in registry with said hole, and with said second arm interposed in said passage between said base and said hole.

2. A coin gauge comprising a unitary mounting block having a coin receiving hole in one face thereof, a coin passage extending downwardly from the rear of said hole through the base of said block, a gauging member insertable up said coin passage to a position behind said hole, said mem-

ber having a coin diameter gauging aperture therein, and means for removably fastening said member with said aperture in substantial registry with said hole.

3. A coin gauge comprising a unitary mounting block having a coin receiving hole in a substantially vertical face thereof, a coin passage extending downwardly from the rear of said hole through the base of said block, a gauging member insertable up said coin passage to a position adjacent said hole, said member in said position extending across said coin passage and having a coin thickness gauging slot therein and means for removably fastening said member in said position.

4. A coin gauge comprising a one piece mounting block with integral front, rear and side walls and having a coin receiving hole in said front wall, a coin passage extending downwardly from the rear of said hole through the base of said block, a gauging member insertable up said coin passage to a position behind said hole, the inner surface of said coin passage near said hole being grooved to receive edges of said member to align said member with respect to said hole, said member having a coin diameter gauging aperture therein, and means for removably fastening said member with said aperture in substantial registry with said hole.

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